Società italiana di
economia pubblica

WORKING PAPERS
No. 197/2003

TAX SYSTEMS AND TAX REFORMS IN EUROPE: PUBLIC FINANCE AND POLITICAL ECONOMICS

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JEL Classification: H20, H24, H25

Keywords: Optimal taxation, equitable taxation, political influence, complexity, progressivity, competition, decentralization

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Pavia, gennaio 2003

TAX SYSTEMS AND TAX REFORMS IN EUROPE:
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Abstract
The traditional optimal taxation literature suggests that the structure of tax systems and the adoptions of fiscal reforms rely on some desirable solution of the classical trade-off between efficiency and equity issues. The alternative approach developed by the equitable taxation theory suggests that the interference of political influence in the market economy has to be limited. However social, political and institutional factors play an important role in shaping both fiscal policies and fiscal reforms. The growing literature on political economics suggests that the complex (multidimensional) tax structure that we observe in our countries depends on political elements and political factors, such as political instability and political influence, and predicts that tax reforms may be adopted and sustained if there exists a political support to them.
This paper reviews the main contributions of the positive and normative approach to taxation of traditional public finance views, and it compares them with the suggestions of the political economy approach. The aim is to provide a theoretical interpretation, based on the interrelation between economic and political factors, of specific issues of taxation and tax reforms in European countries, focusing on the rules of tax neutrality and horizontal equity, the complexity and degree of progressivity of the income tax, the role of competition and decentralization.

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University of Pavia - January 2003

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1. Introduction

The theory of taxation and tax reforms has been largely studied in the literature of public finance. To finance its goal of both providing public goods and services and operating changes in the distribution of income generated by the market, the government uses taxes. The positive analysis of taxation has concerned the different taxes that are used by the government, their features, their distribution and their impact on the economic system. The normative analysis has focused on how the government should minimize the "excess burden", that is, welfare losses from taxation. The literature suggests that this would require taxation to be imposed as lump-sum, so that taxpayers could not avoid taxation by changes in their behavior. However, since public goods have a different nature than private goods, and due to the limited information of the government which makes impossible to identify individual characteristics that taxpayers cannot change to avoid their tax payments, taxes are usually compulsory and not of a lump-sum nature. In this context the well-known trade-off between efficiency and equity may arise (Fair, 1971, Stern, 1982, Ahmad-Stern, 1984): a tax system is efficient if it minimizes the total excess burden of raising revenues, while this rule turns out to be in contrast with the purpose of redistribution. The more general literature on optimal taxation (OT) (Ramsey, 1927, Mirrlees, 1971, 1972, 1976) includes redistributive purposes, but at the expense of practicality. The New New Welfare economics, reviewed by Stiglitz (1987), makes clear the nature of these equity-efficiency trade-offs, inherent in redistributive tax policies. The government is assumed to start with imperfect information, as a limit to its ability to impose taxes, and it tries to identify the Pareto efficient tax structures, i.e. the tax structures which get the economies to the utilities possibilities schedule. It turns out that in this "second best" world a self-selection, or a partial pooling equilibrium is required for Pareto efficiency, with the marginal tax rate on the highest income individuals being equal to zero. The trade-off derives from the fact that the self-selection constraint generates distortions from redistributing resources from the more able to the less able individuals, and this distortion is larger if a larger revenue has to be raised.
An alternative approach to the normative analysis of taxation is the Equitable Taxation theory (ET), derived primarily from the work of H.Simons (1938): the public sector has the important role of providing services that the private sector can not supply and to redistribute. Taxation has to be developed according to the principles of fairness and has to limit interference of the political process in the market economy. This idea leads to the concept of comprehensive income and comprehensive tax base, which however turns out to involve many measurement problems and administrative difficulties.
However efficiency and redistributive issues may not exhaust the theory of taxation and tax reforms. A crucial role is played by collective choice and political institutions, and thus a political

economy approach (Persson and Tabellini, 2000a) should be included. Collective choice mechanisms and their functioning are central both at the allocative level (how to pay for the service to provide, how much, etc) and at the redistributive level (the degree of redistribution and how to finance it). From a positive point of view, in democratic countries, voting and the competitive political process (rather than a social planner) determines tax policies and tax systems and shape the equity and efficiency effects of taxation. From a normative point of view, in democracies economic reforms, such as tax reforms, may be adopted and sustained if they enjoy enough political support. The action of pressure and interest groups may also play a significant role in shaping fiscal policies and fiscal reforms (Becker, 1983).

Wicksell (1896) and Lindahl (1919), and later Buchanan (1976) and Brennan and Buchanan (1980) open this strand of the literature, which has been defined the normative fiscal exchange (FE) approach to taxation. The central problem addressed in the early literature was how to design institutions of government appropriate to the electorate's preferences and how to avoid that the action of organized interest groups could have an impact on the functioning and outcome of the electoral processes. Later, the analysis of Brennan and Buchanan (1980) has focused on the role of the electoral process as a constraint to limit the government's power to tax (the Leviathan) and on the design of the most desirable electoral process. Tax design is a question of constitutional design, and tax reform is a matter for constituent assemblies or other groups of taxpayers, not for the government itself.

Since then, there have been few relevant contributions trying to include political economy issues into the traditional optimal taxation theory (see Atkinson, 1995). A relevant exception is the work by Hettich and Winer (1988, 1997, 1998, 1999, 2000), which I will continuously refer to in this chapter.

This paper proposes a theoretical introduction to the case studies analyzed in the working papers SieP September 2002 (Italy, France, Germany, United Kingdom, Netherlands, Spain, Ireland). Following the above considerations, I adopt a comprehensive theoretical perspective to include efficiency, redistributive and political considerations. This paper interprets several issues raised by the analysis of tax systems and tax reforms in European countries in the perspective of the results both of the traditional taxation theory and the political economy approach. It is thus intended as a link between what we actually observe in the countries and how this can be explained by the theory. The theory may help us to stress what are the determinants[1] (the interrelation between economic and political factors) of the current systems and the main forces behind the proposed reforms and it may suggest directions for future economically and politically feasible reforms.

The paper is organized as follows: next section presents some results of major contributions of the political economy literature concerning taxation and tax reforms and links them to the rules of the traditional public finance literature on taxation. Section three identifies specific issues at the center of the current debate on taxation and tax reforms in the selected countries and interpret them from a theoretical perspective. Section four concludes.

2. Theories of taxation and tax reforms

In this section, I review some of the theoretical issues raised by the political economy literature concerning taxation and tax reforms. First I examine different approaches in the political economy literature to analyze the complex tax structure that we observe in our democratic countries. Second, I focus on the role of political influence and political instability on taxation.

2.1 Political Economy and Taxation

In democratic societies the political process plays a crucial role in shaping the complex tax systems that we observe. Many authors have explained how the interaction of the private economy and the political process determine the current structure of the tax systems (see Hettich and Winer, 1999 for a review). They have adopted different frameworks. First, a median voter approach has been used to study what single proportional tax rate imposed to finance a public good will emerge in equilibrium when individuals have preferences for both the public good and the output of the private economy and the tax rate is chosen by majority rule (Roberts, 1977). The standard result applies: if all preferences are single-peaked, the equilibrium tax rate is the one which maximizes the welfare of the median voter. However tax structure is inherently multidimensional, including tax bases, rate structures and several special provisions. Thus, a multidimensional policy space arises. It is well-known that in a multidimensional issue space Nash equilibrium of a majoritarian voting game may fail to exist. The literature provides alternative solutions: structure-induced equilibrium, probabilistic voting, the Leviathan model, the bargaining game, interest groups, factional conflict. The structure-induced equilibrium considers an institutional structure where the dimensions of the tax policy space are separated, and each of them is decided upon in a separate legislative committee. In each committee the median voter theorem applies, given the median choices of other committees. This approach has proved to be more useful to study specific features of a tax structure rather than the formation of an entire tax system, as in Inman and Fitts (1990). However this approach requires separation of decisions on different aspects of tax systems, which is difficult to identify.

The probabilistic voting model assumes that voters choose between parties on the basis of the policies proposed by the parties, while parties propose their platforms without knowing with certainty how voters will vote, but maximizing their expected number of votes. This approach implies that a small change in a policy platform will not lead to a total change of the support from the incumbent to the opposition (or viceversa, according to which party proposes a more favorable outcome), like it happens in deterministic voting, but it only leads to a change in the probability of support. Therefore, an equilibrium exists even if the tax system is multidimensional. The equilibrium is a balance of opposing interests in the electorate, with some interests being more political influent than others. The tax structure which emerges as an equilibrium from this approach is quite realistic (see Warksett, Winer and Hettich, 1998), as a simple example based on this approach shows in the next subsection.

The Leviathan model (Brennan and Buchanan, 1980) assumes that there are no constraints to the power of taxation of the state, which has the objective of maximizing total revenues. This assumption is quite unrealistic, since public policies are normally influenced by many opposing interests. The tax structure chosen by the Leviathan is multidimensional (bases, rate structures, special provisions). However the results are quite unrealistic: broad bases should be preferred to minimize tax evasion and regressive tax rates accompanied with special provisions to maximize revenues.

The cooperative game model delivers the formation of tax structures from coalitions, where voters play a cooperative bargaining game with threats. Aumann and Kurz (1977) find interesting results using this approach and introducing the attitude of voters towards risk. They find that marginal tax rates are above 50 per cent for all voters and are equal to 50 percent if utility functions are linear. Additionally, marginal tax rates turn out to be higher for voters with higher absolute risk aversion.

The interest groups model assumes that the political process is affected by the resources (money, information or time) given by special interests to the political parties in exchange of favorable policies (Downs, 1957, Stigler, 1970, Breton, 1974, Becker, 1983). However, the role of such special interests groups does not appear crucial to explain the tax structures or the complexity of taxation in the real world in addition to economic and political elements.

A new alternative approach has been recently formulated by Roemer (1999), who develops a new equilibrium concept for political games, based on factional conflicts within parties. There are two parties. Each party is assumed to consist of three factions: reformists, militants and opportunists. Each faction has a complete preference order on the policy space, but together they can only agree on a partial order. In this context, the author shows the existence of Nash equilibria of the two-party game, where the policy space consists of all quadratic income tax functions (bidimensional). The author also shows that in these equilibria both parties propose progressive income taxation, which is a realistic prediction.

This brief description of the different models suggests that the probabilistic voting approach is quite appropriate, in terms of technicality and empirical implications, to explain the economic and political factors which determine of the complex tax systems in our democratic societies, and I thus choose to focus on this approach in the following section.

2.2 Political Influence: A probabilistic Voting Model.

Following Winer (2001), I formalize a simple probabilistic voting model to show that the political influence of different groups of voters may have a crucial role to determine the tax structure, on top of equity and efficiency considerations. Formally, this means that if political influence is distributed unequally among voters, it may be optimal a reallocation along the Pareto-utility frontier. This result belongs to the positive analysis of taxation.

I assume that the fiscal system consists in a government providing one public good G and imposing H proportional tax rates t_h, one for each voter, applied to the voter's tax base B_h. Each individual h solves his economic problem by maximizing his utility function, which depends positively on the public good G and negatively on its tax rate t_h. The maximization problem delivers the indirect utility function of the individual h: $v_h\ (t_h, G)$.

There are two parties, or candidates, the incumbent i and the opponent o. Before the election takes place, the parties commit to a policy platform, $(t_{1i,} t_{2i}, \ldots t_{Hi}, G_i)$ and $(t_{1o,} t_{2o}, \ldots t_{Ho}, G_o)$. They act simultaneously and do not cooperate. Each party chooses the platform which maximizes its expected number of votes. Platforms are chosen when the election outcome is still uncertain. Voters vote for a party according to a probability function, which depends on the policy platforms proposed by the opposite parties. The probability that voter h votes for the government is a function of the difference in the voter's indirect utility under the government's policies and those of the opposition:

$$\pi_h = f_h(v_{hi} - v_{ho}) \tag{1}$$

where v_{hi} is the indirect utility of voter i under the policies implemented by the incumbent government i and v_{ho} is the indirect utility of voter i under the policies implemented by the opponent government o. The function f_h is a generic function of this difference, which may include an ideological term[2].

The total expected vote for the government incumbent i can be written as:

$$EV_i = \sum_{h=1}^{H} \pi_h = \sum_{h=1}^{H} f_h(v_{hi} - v_{ho}) \tag{2}$$

and similarly for the opposition. There is common knowledge to competing parties of the probability density functions and the structure of the private economy.

In the absence of administrative costs, the government chooses the tax rates $t_1, t_2, \ldots t_H$ and the level of public good G to maximize the expected total support, given the platform of the opposition and subject to the budget constraint:

$$G = \sum_{h=1}^{H} t_h B_h \tag{3}$$

where B_h is the tax base of tax on individual h, $h=1 \ldots H$ and it thus depends on t_h.

The first-order conditions are the following ($h=1, \ldots H$):

$$\begin{aligned} &\frac{(\partial f_h / \partial v_h) * (\partial v_h / \partial t_h)}{B_h(1+\varepsilon_h)} = \lambda \\ &\sum_{h=1}^{H} \frac{\partial f_h}{\partial v_h} \frac{\partial v_h}{\partial G} = \lambda \end{aligned} \tag{4}$$

where $\varepsilon_h = \partial B_h / \partial t_h * t_h / B_h$ is the elasticity of base B_h with respect to t_h and λ is the Lagrange multiplier associated with the government budget constraint.

The first order conditions make clear that the government chooses the tax rates among voters that equalize across taxpayers the marginal political cost or reduction in expected votes of raising an additional unit of money. For a given level of revenues the total political cost has to be minimized. As a result, the tax structure is complex, with a different tax rate for any different individual. Additionally, the government chooses the level of public good so that the marginal political benefit of spending an additional unit of money is equal to the marginal political cost (λ).

It is a standard result that, since they solve a symmetric problem, in equilibrium (if it exists) the two parties will choose the same policies. Let assume that an equilibrium exists and define θ_h the particular value of the partial derivative $\partial f_h / \partial v_h$ $h=1, \ldots H$ at a Nash equilibrium of the electoral game. Then, the first order conditions for politically optimal equilibrium strategies can be written as follows:

$$\frac{\theta_h * \partial v_h / \partial t}{B_h(1+\varepsilon_h)} = \lambda \tag{5}$$

This condition is the same as the one that will be derived by maximizing the political support function $S = \sum \theta_h v_h$, subject to the government budget constraint, and it is thus consistent with Pareto efficiency. The weights θ_h represent the responsiveness of the voting behavior to a change in the individual welfare, as perceived by the party, and thus they are a measure of the effective influence exerted by different voters on policy outcomes.

From equation 5 it can be noted that if these weights θ_h are equal for all voters, the tax system equalizes the marginal efficiency cost of the tax for all individuals and minimizes the excess burden of taxation, while if the political influence is distributed unequally because θ_h are different, it is politically optimal to impose a lower tax rate on the individual more politically influent (with a higher θ_h) and thus impose on him a smaller loss of utility (lower $\partial v_h/\partial t_h$) with a larger marginal efficiency cost (higher $B_h(1+\varepsilon_h)$). Notice that this means that parties trade-off the welfare and support from different voters, even though Pareto-efficiency is achieved. This implies that political elements play their own role on top of efficiency/equity considerations.
If the function f is specified including the propensity of voters to move from one party to the other as the policy change, as opposed to their ideological attachment to the party, an additional policy implication arises: governments, who take preferences and ideology of the voters into account, may be willing to implement reforms which favor the more "mobile" groups, i.e. groups that are ready to reward them with their votes in case of a reform which favors them (swing voters). This is in line with a more general result of the political economy literature: reforms are implemented only if they are politically feasible and sustainable, i.e. if they enjoy enough support from the voters (in the field of social security , see Galasso and Profeta, 2002 for a review).
The simple model developed in this section highlights the role of political influence on the determination of the income tax structure. In section 3 these results will be compared with the experience of the selected countries, and additional relevant factors, which are not included in this simple mode, such as administration and information costs, will be discussed.

2.3 Political Instability

Not only the structure of the tax systems, but also their evolution depends both on the economic structure of the country and on its political system. To this respect, Cuckierman, Edwards and Tabellini (1992) show that two features of a political system are important: the instability, represented by the probability of loosing office, and the degree of polarization between the alternating governments. The equilibrium efficiency of the tax system depends on these two features. At any given moment of time, the existing tax system represents a constraint on the fiscal policy (i.e. the choice of tax rates and the level of composition of government spending) of the current government. This constraint may be welcome by politicians who oppose the current governments. This implies that tax reforms may be determined by strategic considerations, i.e. by taking into account how they will constraint fiscal policies of future governments. For example, previous governments may deliberately choose to maintain an inefficient tax system, in order to constraint the choices of future governments with which they might disagree. The authors show that this is more likely to happen in countries with more unstable and polarized political systems. In other words, political instability and political polarization are associated with an inefficient tax system, which facilitates tax evasion and imposes high collection costs, since it induces government to behave myopically, or strategically, in order to create a "constituency for reelection". As a consequence, the following empirical prediction is tested across countries: more unstable and polarized countries collect a larger fraction of their revenues through seignorage, which reflects inefficiency, i.e. high tax administration and collection costs. According to the authors' data, the ranking of the countries analyzed in this book is as follows: Italy has been characterized by the highest political instability and highest tax inefficiency, followed in order by Spain, Ireland, Germany, France and the United Kingdom.

3. Issues of taxation and tax reforms: theory and practice

This third section is devoted to the analysis of specific issues raised by the country studies, which I examine taking into account both the factors raised by the traditional public finance theory and the political determinants. I select the following issues: tax neutrality, horizontal equity, complexity of the income tax, progressivity of the income tax, competition and decentralization *versus* harmonization (including the role of local taxes and the impact of globalization).

3.1 Tax neutrality

According to the rule of tax neutrality, all taxable activities from different sources (labor, capital) should be treated equally by the tax system (taxed at the same effective marginal rate). Similarly, different capital incomes should be taxed equally. Traditional normative theories of public finance do not agree on this rule.

The optimal taxation (OT) literature proceeds by a constrained optimization of a social welfare function by the social planner, given the revenue constraint, available tax instruments and their influence on private behavior. A trade-off between equity goals and the deadweight costs of taxation arises. A tax on consumption is preferred to a tax on income to avoid distortion in the intertemporal allocation of resources. Capital taxation plays a minor role. Broad-based taxes are preferred since, given the total revenue, they distort less the relative prices, avoiding inducing substitution among activities that are taxed at different rates. If other bases are present, a general result (Ramsey, 1927) is that differentiation is required to efficiency, according to the inverse elasticity rule, i.e. heavier taxation on more inelastic bases.

The theory of equitable taxation (ET) considers comprehensive income the more appropriate measure of ability to pay, and therefore the appropriate tax basis of a single, broad tax. This implies complete tax neutrality: any source of income, including capital, should be taxed equally.

The fiscal exchange approach (FE) instead prefers the adoption of narrow, multiple bases, that limit Leviathan to a desirable level of total tax revenues. Taxes on labor income or consumption are better than taxes on capital, since labor and consumption are more elastic bases and thus increases in tax rates induce large economic responses, which are desirable.

Political economy considerations induce to prefer tax differentiation to tax neutrality, as required by the nature of the political competition. For instance, grouping different activities into the same tax base in order to achieve neutrality leads to an increase in political opposition, since it raises a taxpayer's deadweight loss associated with the tax payment. However, administration and information costs play a role in the opposite direction. By grouping, for instance including income from different labor activities in the same tax base, the government can save on administrative costs and use the resources saved to provide public goods which may lead to additional political support. Information problems also arise, if in a differentiated context taxpayers are induced to substitute more heavily taxed with more lightly taxed activities, and thus tax neutrality can be justified. In a political economy framework these kind of information problems are even worse, since it has to be taken into account not only the effect of taxation on the economic behavior of the individuals, but also on their voting behavior. This argument is again in favor of tax neutrality.

Political economy considerations about the rule of tax neutrality have played a crucial role in several common trends which can be identified from the analysis of the reforms recently implemented in the European countries considered in this book. I focus and explain a couple of them.

i) We observe a general trend towards the shift away from labor taxation.

This shift may be achieved in different alternative or combined ways, as it happened in our countries:

- a trend from direct to indirect taxation (Netherlands)
- a reduction of the personal income tax (United Kingdom, Netherlands, Italy)
- a reduction of the social contributions (United Kingdom, Ireland, Netherlands, France).
- an increase of the tax on property (United Kingdom, France)
- an increase in environmental taxes (Netherlands)

The general justification of this shift is that it will improve the market performance and the efficiency of the system (according to the OT rules) and will enhance growth. However, I argue that these alternative ways are implemented under political constraints. The decrease of direct taxation, especially personal income taxation, with the details that I will specify in the next subsection, and increase of indirect taxation also derive from political competition. The low rate of social contributions in the UK or Ireland responds to a "Beveridgean" social security system, which is highly redistributive and characterized by a small public PAYG system completed by a large second private pillar. In a political economy framework, it can be shown that countries with larger inequality and better performance of the capital markets are more likely to have this kind of system, which not only redistribute in favor of the poor, but, implying lower contributions, allows the richer to invest more in alternative and more profitable assets. Also, consistently with the approach of interest and pressure groups in the political economy literature, taxes on environmental may arise under the pressure of interest groups (such as the environmentalist), i.e., these taxes tend to be higher in countries where the pressure of these groups are larger (like Netherlands, and not for instance in Italy).

ii) There is a trend towards neutrality in capital income taxation.

The common and uniform treatment of all capital income is a declared objective of the OECD, and many governments have adopted it. This is justified by efficiency reasons, as a way to reduce tax evasion and erosion of the tax base, due to the shift from more heavily taxed capital income sources to less taxed capital income sources. However on political grounds, it seems very difficult to be pursued, due to the need of differentiation to reach a political support. Competition among countries also plays a crucial role in capital income taxation (see section 3.5).

3.2 Horizontal equity

Another rule established by the traditional public finance theories of taxation, at the basis of the equitable taxation (ET) approach, is horizontal equity. The concept of horizontal equity is based on the definition of a comprehensive income tax base, as proposed by Simons in the 30's and 40's. Individuals with equal ability to pay taxes, as measured by comprehensively defined incomes, should pay equal taxes. However, this idea has never been implemented, because of practical (measurement) and theoretical (is the correct base for comprehensive income the income or the consumption?) reasons. On the political level, one might expect that this idea would receive the support of the taxpayers, who would perceive such a tax system as fair. But in practice, difficulties arise also on political grounds. There is no political reason why a government should tax only, or to a larger extent, comprehensive income. Political costs associated with different components of comprehensive income vary a lot, and thus income from these different sources should be treated differently also for political reasons (see the section on tax neutrality). In fact, the political competition requires appropriate differentiation to gain the support of taxpayers since individuals and groups exert a different effective political influence in the political process. Therefore, horizontal equity may not be an objective for a party, since it has to maximize its support by taking into account the effective political influence of different groups.

The recent experience of our countries can be read in this perspective: planned reforms are stressing much more the vertical equity than the horizontal equity, by mainly focusing on the degree of progressivity and the complexity of the income tax, as I explain in the next subsection. The rule of horizontal equity has been generally neglected, by the justification that it will remain a minor problem, when the income tax will be simplified. However, as it is clear from the case of Italy, many distortions regarding horizontal equity may arise since the system planned by the reform combines an apparent simplification with several special provisions. Therefore, it can be argued that horizontal equity is not discussed, not because it is not a serious problem, but because it is politically optimal to differentiate according to the political influence that the different groups of earners exert as voters.

3.3 Complexity of the income tax.

In the analyzed countries we observe a general common declared intention of increasing simplicity of the income tax, mainly through a reduction of the number of brackets (United Kingdom, Italy). However, *de facto* the implemented changes do not really seem to lead to this objective of simplicity, since deductions, exemptions, special cases multiply. I argue that this inconsistency is due mainly to political reasons.

Traditional theories of taxation are not able to explain the income tax structures that we observe and the trends of planned reforms. The optimal taxation literature (OT) predicts that each individual should be taxed at a different rate, depending on its marginal utility and its weight in the social welfare function, which delivers the maximum complexity of the income tax. However regarding special provisions, the predictions are not clear: exceptions, deductions and tax credits are considered appropriate depending on the government's objectives, restrictions and the screening problems faced by policy makers. This explains only a part of what we observe, mainly the complexity, but cannot account for the fact that the countries are currently planning to introduce more simplicity as an objective of their reforms. The equitable taxation (ET) approach instead does not care about the vertical complexity of the income tax structure (the number of brackets as an instrument to reach vertical equity), while it argues strongly against the existence of special provisions. It thus cannot explain why we observe so many special provisions. The fiscal exchange (FE) approach argues for complexity of the tax structure, also in terms of special provisions, to limit tax discrimination exerted by the Leviathan. Again, how to explain the trend towards more simplicity remains unsolved.

Following a political economy approach, economic and political considerations are interrelated in explaining the complexity of the income tax that we observe in our countries and the trend towards a simplified structure, with an important role for special provisions. As shown in the simple model presented in the previous section, in a democracy the political competition requires complexity, i.e. many tax rates which allow to carefully discriminate among heterogeneous voters (Warskett, Winer and Hettich, 1998) and thus to maximize the support that each party expects to receive in the next election. In the limit each person should be taxed with a different tax rate, to better respond to its preference. This result is similar to what obtained in the OT literature. However, this is not the end of the story. When the system becomes well developed, public expenditures and taxation raise and this requires an increase of complexity of regimes and raises the administration costs, which make such a complicated tax structure too expensive, and force to reduce complexity and to group the individuals together. Thus, the government decides to create rate brackets to group individuals. Then, it has to decide how to establish the politically optimal number of brackets, how to assign individuals to these brackets in a manner consistent with its political objectives and how to choose the rate of taxation applied to each group. A trade-off is implicit in the choice of the number of brackets: on one side decreasing the number of brackets imply a larger loss in expected support, since it is no longer possible to equalize marginal political costs or oppositions to taxation across individuals. On the other side decreasing the number of brackets imply lower administration costs, and thus higher revenue and the possibility to spend more on public goods, which can be converted into additional support. In presence of administration costs, information costs may induce an even stronger simplification, if taxpayers self select and choose to earn a reduced income in order to be eligible for a lower tax rate (if their increase in leisure more than compensate the loss in after-tax earnings). Therefore, a well-developed system may be at a point where costs are so high that the need to simplify is predominant. At this point, special provisions arise as a way to reintroduce differentiation, as required by political optimality, in a broadly defined simplified tax structure.

So, how can we explain the recent experience of the European countries?

i) With high administrative and information costs the structure which emerges is less complex. In fact, the flat-rate or broad-based tax is becoming very popular (UK, Italy).

ii) However, in a democracy, we need to combine a flat-tax rate (or broad-based) with special provisions (exemptions, deductions, exclusions) which are another way to differentiate, as necessary because of the political competition (see Italy and UK).

iii) The political influence of the poor increases the degree of complexity, because the rich oppose less to an increase of the tax rate on them, as required by the poor, if there is more differentiation. Therefore, governments which take more into account the interests of the poor tends to increase the number of brackets, special regimes and complexity in general.

3.4 Progressivity of the income tax

Related to the general issue of the complexity of the income tax, there is the important and more specific issue of the degree of progressivity of the personal income tax. Less complex income taxes, closer to a flat tax rate, imply in general a lower degree of progressivity, though if these systems provide larger special provisions (deductions, exemptions, etc) the impact on the degree of progressivity is not clear.

The optimal taxation theory (OT) suggests a hump-shaped progression of marginal rates: the optimal tax rate is zero for the poorest, to respond to equity considerations, and zero for the richest to reduce their huge distortion, in order to reach efficiency. The equivalent taxation (ET) theory leaves vertical equity indeterminate but insists that persons with the same comprehensive income must pay the same amount of taxes regardless of the sources of their income. The fiscal exchange (FE) approach argues for progressive or proportional taxation to oppose Leviathan's taste for regressivity.

The degree of progressivity depends on economic factors, such as the income inequality, and on political factors, such as the political competition, or the degree of information of the voters. Recent evidence show that the degree of progressivity in OECD countries is related to political factors, such as the number of parties and the political instability, or to interest groups factors, such as the unionized labor force and the number of elderly (Galli, 2002).

The experience of our countries show a common trend towards both a reduction of the top marginal tax rates and a reduction of the bottom marginal tax rates. Political constraints may play a role behind these facts. First, the reduction of the top marginal tax rates, as a measure of the reduction of progressivity[3] depends on political elements, as in Galli (2002): the ideology of the government (left-wing governments tend to favor progressive taxation), the degree of political instability (unstable governments are not able to cut expenditures or increase taxes and thus they favor tax progressivity) and the power dispersion in the government (competition among parties in a coalition government result in higher spending and higher progressivity than a single-party majoritarian government or a minority government).

Moreover, the reduction of the bottom rates may respond not only to efficiency motivations for the low-skilled, but also to political motivations, if the competing parties assume "Rawlsian"- oriented objective functions and seek the support of the low-skilled groups.

3. 5 Competition and decentralization *versus* harmonization.

Another crucial issue in the policy debate is the combined trend towards more competitive and decentralized tax systems and the effects of globalization and harmonization into the European Union.

On one side there is a general trend towards more competitive tax systems, in particular a trend to reduce the tax on financial and corporate capital with the purpose of attracting investments. This has already been done in Ireland and Netherlands and it was one of the main objective of the German reform in 2001, as well as the Italian reform. At the same time, we observe a general trend towards decentralization of the tax policy process (Italy, Spain). Similar political reasons may explain this combination of competition and decentralization: competitive political process may generate information in a decentralized system. Decentralization is required by the complexity of current systems, and may be a solution of the information problems and the high administrative costs explained in the previous sections. Decentralization in fact allows to economize on information collection and processing costs and to benefit from specialization of knowledge required for the use of particular tax instruments. Efficiency reasons also play a role in the process of decentralization: an economically efficient tax system in a modern economy is necessarily too complicated and one can choose either to reach a compromise by adopting simplified rules, which may reduce welfare, or to decentralize. At a local level, politicians may better reflect voters' preferences about taxation. This implies that political reasons play a crucial role in decentralization. Political reasons behind decentralization have been tested by Ashowrth and Heyndels (1997) for the Flemish case. Politicians, who have the objective of maximizing expected votes, decide the tax rates taking into account their beliefs about the political cost (in term of loss of votes) associated with the tax rate and their attitudes towards taxation in general. The authors show that at a local level, both these factors depend closely on the voters' preferences and oppositions.

However, decentralization has also several problems. Tax competition among jurisdictions in a decentralized world may have a detrimental impact on the efficiency of public goods' supply and redistribution. Following Tiebout (1956), fiscal autonomy is necessary for achieving a Pareto-efficient allocation of local public goods when there exist different competing local communities. Citizens are expected to "vote with their feet", i.e. choose their residence in a community which provides them with their personally optimal combination of fiscal burden and public goods. Communities are therefore competing and in equilibrium they will result with different quantities and types of public goods according to citizens' preferences. However, if skilled labor and capital are not perfectly mobile, different tax rates emerge which may represent detrimental effects for the citizens. Feld (1997) argues that participation in the political process, elections, political parties, demonstrations (*voice*), may be another mechanism, alternative to the Tiebout one (*exit*), for the voters to express their opposition to the government in a democracy and may have effect on allocative and distributional outcome, such as tax competition[4]. Moreover, at a decentralized level, pressure groups may be more powerful to exert their influence and politicians are induced to favor them without taking into account the implications for all voters. This creates a political market failure with the government creating actions that deviate from Pareto efficiency. This case has been characterized by Rodrik (1992) as "subordinate government". Subordinate government may also uses information in a biased manner, disregarding the incentive effects of its tax policy for the activity of special interests and the consequences of these effects for the welfare of individual voters. At the end, the choice of government may not coincide with the optimal allocation.

On the other side, globalization and international integration also affect the tax structure. These effects are explained by the so-called "efficiency hypothesis" (governments compete for mobile factors and goods) and compensation hypothesis" (governments expand the welfare state to ensure citizens against the increased economic risk related to globalization). The basic results of the tax competition literature show that capital taxation is negatively related to the degree of international capital mobility (though this relation is much less clear when effective tax rates are considered rather than official tax rates), while labor taxation is positively related to international integration of national economies. Also, larger countries levy higher capital tax rates than smaller countries, because the erosion of their tax base is smaller in per capita terms. These predictions are tested by Bretschger and Hettich (2002) in a panel of 14 OECD countries. A general result of the literature of tax competition (as originated by Zodrow and Mieszkowski, 1986 and Wilson, 1986 and recently surveyed by Wilson (1999)) is that capital tax competition generates a fiscal externality which delivers too low tax rates and underprovision of public goods in equilibrium, and it may thus be detrimental. However, this undeprovision of public good may be not so bad if it corresponds to a reduction of improductive expenditures. To this respect, political elements play a crucial role (Petretto, 2002). In the FE approach, fiscal competition has a positive role in limiting the power of the Leviathan which aims at enlarging the public sector and taxation, in spite of inefficiencies. Local government are assumed to be interested at maximizing their budget and they are only partly motivated by reelections. If a non-distortionary taxation is unfeasible, fiscal competition induces a reduction of the improductive expenditures (Edwards and Keen, 1996). A general principle is that tax competition is preferred, even if it creates distortions, since these distortions are small compared to the large inefficiency due to the improductive public expenditures which would emerge in absence of competition (Wellisch, 2000 and Eggert, 2001). In the political economy approach, focusing on capital income taxation, Persson and Tabellini (1992) show that, if governments choose their fiscal policies according to the electoral mechanism, i.e. taking into account the voting behavior of the citizens, the competition across countries does not lead to an extreme reduction of the equilibrium tax rates on capital income. This is because voters know that an increase of the tax rate in their country will be partly compensated by a correspondent increase in the foreigner country (as the optimal strategies of the governments in two competing countries are strategic complement), while the governments over-estimate the amount of capital that would be induced to migrate due to a change in their fiscal policy. As a consequence, in a symmetric equilibrium, the median voter in each country votes for a government with a capital endowment lower than its own capital, and thus the tax rates on capital are higher than what would be obtained without considering the voting mechanism.

In a recent paper, Janeba and Schjelderup (2002) aim at conciliating the tax competition literature and the Public Choice approach in a single framework. They examine the effect of increasing capital mobility (or globalization) both in terms of fiscal externalities and political distortions arising from selfish policymakers. They show that increasing competition is likely to improve voter utility. Moreover, they analyze the different political response to increasing tax competition between Europe and the U.S.: while in Europe there is a long debated issue of coordination or harmonization of tax policies (not really achieved, but at least pursued by rules and agreements), in the US competition among states is positively considered as a key element of the federal system. According to the authors, these different political responses may be explained by the different political and budgetary institutions of Europe and the US (Persson and Tabellini, 2000b): parliamentary democracies, which are common in Europe, provide a more cohesive government responsible of the entire government budget, which turns out to be associated with higher taxes, higher public goods provision and higher government waste than presidential-congressional democracies, like the US, where the budget making process is made by committee with separeted powers. Following this comparative public finance approach, and generalizing by introducing multiple countries whose governments compete for mobile capital, they study tax competition in a base version of the model with politicians seeking reelection. In a closed economy, a general result is that voters must allow politicians to obtain some rents for them to seek reelection. As a consequence, in both regimes the closed economy is not efficient, since taxes are too high. Interesting results are found when the authors compare the equilibrium in an open economy (consisting of an arbitrary number of identical countries that have the same political system) and in a closed one. In the base version of the model, opening the economy reduces tax rates on mobile capital under both political regimes (parliamentary democracies or presidential-congressional) and reduces the rents to politicians. This is due to the fact that tax rates in the rest of the world decrease, making it difficult to raise revenues for politicians forgoing reelection, and to the fact that when more countries compete to attract capital, the capital stock falls in a country where politicians do not seek reelection. Since politicians rents also fall, the reduction of tax rates does not imply necessarily a loss in voter utilities (opposite to the traditional view of tax competition). Also, the fall in rents of the politicians does not guarantee an increase in voter utility (opposite to the FE approach). In parliamentary democracies, opening implies that the public good level falls and the effect on voters' utility is thus ambiguous, while in presidential-congressional regimes the public good level is unaffected, and thus voters' utility increase. A more intensive competition over capital (i.e., if more countries compete) yields similar results. Voter utility may increase in parliamentary regimes if the marginal product of capital is a positive constant, while it always increases in presidential-congressional systems. The authors also formulate a second version of the model, where politicians only want to extract government resources for themselves. The results are similar to the ones described for the base version, though in this second version it is more likely that tax competition is harmful under both political regimes.

4. Tax systems and tax reforms in Europe between public finance and political economy theories

This section summarizes the main results of the chapter and provides a conclusive interpretation of the experience of the European countries according to the suggestions of the theory, taking into account efficiency, equity and political determinants of the tax systems and tax reforms.

The experience of European countries, which is described in this book, show that economic and political determinants interact to shape the current tax system and the planned tax reforms. The structure of income taxation that we observe can be seen as the result of a political process where politicians maximize their expected number of votes. To gain the political support, respecting the constraint of administrative costs, a complex tax structure emerges, with grouping individuals in brackets and grouping activity into tax bases and special provisions. The common trend towards a reduction of complexity and a reduction of the degree of progressivity that we observe in our countries has not only economic determinants, mainly efficiency reasons, but also political determinants, such as the need to reduce high administration and information costs in order to increase the political support, or to meet the preferences of groups of voters who exert more influence. Competition and both decentralization and globalization have a strong impact on fiscal policies, as shown by the recent experiences of our countries. In an international integrated world we see countries competing among each other on tax rates. Also, decentralization arises as an alternative solution to the high administration and information costs. Both competition and decentralization create information.

What conclusive interpretation of the experience of the selected European countries emerge from this analysis?

At the first stage of our modern economies, public expenditures and taxes are low, and thus complexity and differentiation is not required, inefficiency costs and losses are small. Then, public expenditures raise and this requires an increase in differentiation and complexity, both for the traditional optimal taxation objectives (in order to minimize the excess burden and inefficiency) and because of the political economy constraints (in order to maximize the political support). But when the system is too complex and information, administration and monitoring costs are too high, a political oriented approach may require simplified solutions (flat rate). The reforms currently planned or recently implemented in the European countries propose such kind of simplified solutions. Having this simplification as their main objective, these reforms have been marginal and parametric adjustments rather than structural changes, while more radical changes were required by economic reasons (see Bernardi's chapter). This is because structural reforms hit the interests of many groups of current voters. Thus, as in other fields of policy reforms (see for example pensions, as explained in Galasso and Profeta. 2002), in spite of being economically desirable, structural reforms may be politically unfeasible, and thus they fail to be implemented.

Notes

[1] In this paper I stress the economic and political determinants of the evolution of the fiscal systems. However, administration costs, the revenue budget, tax evasions etc. are also relevant. For these issues see Musgrave (1969).

[2] The probability that a voter votes for a party depends also on ideological elements, see Persson and Tabellini (2000).

[3] The top marginal tax rate may be a measure of progressivity, as in Galli (2002), though it is generally considered a quite poor measure. The Kakwani index or the distance between top and bottom rates is generally preferred.

[4] The author also provides an empirical analysis of the impact of referenda, which represent the possibility to participate in the political process by voters, on tax competition between the cantons in Switzerland.

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